

REPORT OF SUBCOMMITTEE ON LABORATORY SERVICES

to the

MINISTER'S ADVISORY COMMITTEE ON UTILIZATION

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REPORT OF THE SUBCOMMITTEE ON LABORATORY SERVICES

The Minister's Advisory Committee on the Utilization of Medical Services established a subcommittee of representatives from the hospital laboratories, private laboratories, provincial laboratories and the Red Cross Transfusion Service to work with representatives of Alberta Hospitals and Medical Care and Alberta Community and Occupational Health (as of September 1988 the two departments were merged under one minister and designated Alberta Department of Health) to examine the role of each sector in the provision of laboratory services and to make recommendations regarding role designation. The committee was further instructed to examine data gathering and reporting systems in each of the sectors, and to make recommendations on data base development. The process agreed to by the Subcommittee involved the preparation of statements of current involvement for the four laboratory sectors including a brief historical summary of each sector. The statements describe the present situation as to the delivery of laboratory services in Alberta. Definitions were developed to clarify the laboratory service designations. Strengths and weaknesses of the current system were then defined by the Subcommittee. A review of activity data gathering and reporting was made. Recommendations for changes to the current system were formulated.

1.0 PRESENT SITUATION REGARDING THE PROVISION OF LABORATORY SERVICES

1.1 INTRODUCTION

Laboratory services provide physicians with patient care information which must be appropriate to the patients' needs, timely, and of the highest quality. These services include the provision of blood and blood components for transfusion therapy. Laboratory services in Alberta are provided by four major sectors: hospitals, private laboratories, provincial laboratories and Red Cross blood transfusion service. The Department of Health is responsible for the funding of all four sectors; however, the criteria and mechanisms for funding of each differ.

The process of developing statements of current involvement necessitated definition of the various components of laboratory services.

1.2 DEFINITIONS

Laboratory Services

Laboratory services is a comprehensive term which includes diagnostic, reference, referral, public health, operational consultative, education and research and development services.

Diagnostic Laboratory Services

Diagnostic laboratory services include testing and medical consultation and interpretation in the disciplines of anatomic pathology, hematology, immunohematology, medical biochemistry and microbiology. These services are ordered by physicians on their patients for the detection, exclusion, diagnosis and monitoring of disease.

Reference Services

Reference services are sophisticated or unique procedures provided to the health care sectors by only a few laboratories.

Referral Services

Referral services are testing provided on patient specimens by one laboratory for another laboratory; that is, an arrangement between facilities for the provision of diagnostic services not performed on site.

Public Health Services

Public Health services are those which support surveillance and epidemiologic studies in the community. They provide support for communicable disease control and the provision of microbiology services mandated by legislation and regulation.

Operational Consultative Services

Medical, technical and management consultation is a function provided in support of the provision of laboratory services.

Research and Development

Research and development is the development of new methodologies for both existing and new procedures, in support of the reference function, and to improve standards of laboratory practice.

Educational Services

Educational laboratory services relate to the requirements from an affiliation by the laboratory or its parent institution, with universities or colleges, and involves the training of professional, technical and allied health care personnel.

Blood Donor Services

Blood donor services include the recruitment and bleeding of blood donors and the processing, storage and distribution of blood products for use in transfusion therapy. In Canada these services are unique to the Red Cross Blood Transfusion Service.

Blood Transfusion Services

Blood transfusion services include the provision of compatible blood products for transfusion therapy and the necessary technical and professional expertise to support safe blood transfusion therapy.

2.0 HISTORY AND PRESENT STATUS OF EACH SECTOR

2.1 HOSPITAL SECTOR

2.1.1 History

Alberta hospitals include small rural facilities, urban and regional community hospitals and health science centres of over 1000 beds intimately associated with medical schools. They have had full support for capital equipment purchases and operational expenses from Government. This support, combined with a program of accreditation by inspection, (supported by the Department of Health and carried out by the College of Physicians and Surgeons of Alberta through the Advisory Committee on Laboratory Accreditation and Quality Control) has resulted in high quality laboratory services in the hospital sector throughout the province. There has been a heavy emphasis on the diagnostic service functions in all Alberta hospitals.

The two major teaching hospitals (the University of Alberta Hospital and the Foothills Hospital) have served as referral and/or reference laboratories for hospitals and other sectors. The funding for the referral and reference services provided by the laboratories in these two major teaching hospitals has been part of the hospitals global budget and microbiology services have been predominately provided by the Provincial Laboratory.

Regional laboratories in Red Deer and Lethbridge have been in existence since 1972. They have provided a referral service in all areas of laboratory services to 43 hospitals and have utilized the two major teaching hospitals and the provincial laboratory as reference centres. The Regional Laboratories in Red Deer and Lethbridge have been funded as separate entities outside the global budget for the hospitals in which they are physically located. Rural hospitals not in the Red Deer and Lethbridge regions until recently received consultation services and reference and referral testing from a variety of sources.

The concept of regional shared laboratory services is now being extended to these hospitals as voluntary regionalization. This concept is in existence or is being developed in the Grande Prairie Regional Hospital, the Medicine Hat General Hospital, the Rocky View Hospital, the Bonnyville Regional Laboratory, the Misericordia Hospital, the Grey Nuns Hospital and the University of Alberta Hospital.

The role of individual hospitals relates to their mission statements, goals and objectives.

2.1.2 Current Service Involvement - Hospitals

a) Diagnostic services

Provide diagnostic services to satisfy the needs of inpatients, outpatients and emergency patients.

Provide emergency diagnostic services on a 24 hour, 7 day a week basis, consistent with each hospital's level of care.

Provide diagnostic services for other sectors and hospitals.

b) Blood Transfusion Services

Provide blood transfusion services to inpatients, outpatients and emergency patients.

c) Reference Services

Provided by the laboratories in the University of Alberta and the Foothills Hospitals. Other teaching hospitals may provide limited reference services.

d) Referral Services

Provided by major urban and regional hospitals for other facilities. Provided to a lesser extent by rural hospitals, usually on a shared service basis.

e) Operational Consultative Services

Hospitals provide operational consultative services to the referring centre (usually another hospital).

f) Educational Services

Hospitals provide educational opportunities for various health care disciplines as required by educational institution affiliation. [Alberta universities and training institutes, national programs of the Royal College of Physicians and Surgeons (C) and the Canadian Society of Laboratory Technologists]

g) Research and Development

Research and development activities are provided in keeping with each hospital's mandate.

2.2 PRIVATE LABORATORIES

The private laboratory sector includes physician offices, small and large physician owned laboratories and corporation owned laboratories.

2.2.1 History

The private laboratory sector began developing in the early 1960's. Funding is on a fee for service basis based on the Alberta Health Care Insurance Plan (AHCIP) Schedule of Medical Benefits. Inspection, accreditation and licensing of private laboratories is handled by the College of Physicians and Surgeons through the Committee for Laboratory Accreditation and Quality Control. This program was started by the College of Physicians and Surgeons for the private laboratories and was later extended to include hospital laboratories. The recent introduction of extended hour walk in clinics has resulted in an extension of evening and weekend laboratory service to accommodate the changing pattern of medical practice in the community. Private laboratories have also provided referral and consultative services to hospitals, mainly rural, for many years.

Ownership of a private laboratory may be by pathologists alone or in partnership with other physicians, non laboratory physicians, or companies and corporations. All

accredited laboratories require the involvement of specialists in Laboratory Medicine as medical directors or staff physicians, or as consultants to smaller laboratories.

2.2.2 Current Service Involvement - Private Laboratories

a) Diagnostic Services

Provide diagnostic service to physicians for non-hospital based patients.

Provide diagnostic services to hospitals for hospital based patients, mainly in rural communities, and for other private laboratories.

b) Reference Services

Reference services are provided as required to support diagnostic services.

c) Referral Services

Referral services are provided in support of other private facilities, rural hospitals and to a lesser extent, urban hospitals.

d) Operational Consultative Services

Operational consultative services are provided to facilities for which the private laboratory is performing referral work.

e) Educational Services

Educational services provide educational opportunities to selected health care workers such as subject Registered Technologists and Clinical Chemists.

f) Research and Development

Research and development is provided to support procedural development of diagnostic services in the private sector.

2.3 PROVINCIAL LABORATORIES OF PUBLIC HEALTH

2.3.1 History

The Provincial Laboratories serve as Alberta's public health laboratories. Counterparts exist in other Canadian provinces. The laboratories located in Edmonton (since 1907) and Calgary (since 1950) provide diagnostic and public health microbiology to medical practitioners, hospitals, health units and other recognized health authorities. The laboratories offered service in anatomic pathology until 1974. Since 1974 the work at the Provincial Laboratories has been confined to microbiology.

From 1974 until 1987 the laboratories had been administered through the Faculty of Medicine at the University of Alberta and were funded by grants from Alberta Occupational and Community Health. In 1987 the administration of the Calgary laboratory was transferred to the Foothills Hospital. The laboratories are now funded by Alberta Health in a global fashion.

The Provincial Laboratories Liaison Committee has been meeting since 1987 and has been the mechanism for coordinating the activities of the Northern and Southern Laboratories.

2.3.2 Current Services Involvement - Provincial Laboratories

a) Reference Laboratory

Provide reference microbiology services for other sectors, thus assuring appropriate in depth work ups and serve as a conduit where necessary to the Laboratory Centre for Disease Control in Ottawa and the Center for Disease Control in Georgia.

Provide consultation as requested by existing committees in the setting of standards for proficiency testing programs.

b) Public Health Services

Provide microbiologic services for public health departments and agencies as well as working closely with epidemiologists in the monitoring and control of the spread of infectious diseases.

Provide needed laboratory service in a timely fashion in response to outbreaks or epidemics.

c) Referral Services

Diagnostic referral services are provided to all sectors.

d) Research and Development

Research and development activities include those required to establish standards of microbiologic laboratory practice, to support a reference service and to analyze epidemiologic data for surveillance purposes.

e) Diagnostic Services

Diagnostic microbiology services are provided to physicians' offices and to rural hospitals.

f) Operational Consultative Services

Limited microbiology consultative services are provided on request.

g) Educational Services

Educational opportunities are provided for health care professionals as required by educational institution affiliation [Alberta universities and the national programs of the RCPS(C) and the CSLT-subject].

2.4 CANADIAN RED CROSS BLOOD TRANSFUSION SERVICE

2.4.1 History

The Canadian Red Cross Blood Transfusion Service acts as Canada's source of blood and blood products for transfusion therapy. In addition, it serves as the supplier of plasma fractionation products; for example Factor VIII. Blood transfusion services are located in Edmonton and Calgary.

Blood transfusion services for hospitals were provided by the Red Cross Blood Transfusion Service until the 1960's, at which time urban hospitals developed their own blood transfusion services using Red Cross supplied blood products.

Funding for this service became the responsibility of Alberta Hospitals and Medical Care (AHMC) rather than the Red Cross in the early 1970's. The funding is provided as a global contribution to the National Red Cross Blood Transfusion Service for Alberta's share. A separate budget for the fractionation products service is maintained. The hepatitis B prenatal screening program is funded by the Department of Health.

2.4.2 Current Service Involvement - Blood Transfusion Service

a) Blood Donor Services

Recruit blood donors and assure an adequate supply of blood products for transfusion therapy.

b) Blood Transfusion Services

These services are provided to hospitals in the absence of on site capability; that is, predominantly to rural hospitals.

c) Reference Services

Support is provided in technical and medical aspects of hospital blood transfusion services, and in particular:

Providing rare blood products.

Providing through the College of Physicians and Surgeons an immunohematology proficiency testing program for hospitals.

Providing serologic testing for organ transplant programs.

Providing cryopreservation services.

d) Research and Development

Provide the research and development needed for method and product research to support the donor and reference services.

e) Diagnostic Services

Diagnostic services include provision of a prenatal screening program for Rh disease and hepatitis B.

f) Educational Services

Educational opportunities (including refresher and upgrading course) are provided to health care workers and professionals.

3.0 DIFFERENTIATING FEATURES BETWEEN AND WITHIN SECTORS

Table 1 summarizes the differentiating features between and within sectors. It should be noted that significant variation of service levels exists within the hospital and private sectors.

3.1 DIAGNOSTIC SERVICE LIMITS

No limits in Table 1 indicate that most services are accredited (full service laboratories) exclusive of a few public health procedures, e.g. AIDS serology. The services performed will be governed by local demand and volume.

3.2 INVOLVEMENT IN THE ACCREDITATION PROCESS

The provincial inspection and accreditation process through the College of Physicians and Surgeons includes only the private laboratories and hospital laboratories. The Provincial Laboratories and the Red Cross Blood Transfusion Service are involved in a variety of accreditation processes but not those used by Alberta hospitals and private laboratories.

3.3 METHOD APPROVAL

All laboratories licensed or accredited (in conjunction with the Department of Health) that do not employ a full time laboratory physician must have each method that is to be used for patient care purposes approved. Such approval is based on proof of medical need, available expertise and consultant support.

3.4 METHOD OF FUNDING THE SERVICE

Private laboratories are funded by fee for service based on a schedule of medical benefits.

Hospital laboratories are funded as part of their hospital's global budget except the regional hospitals in Red Deer and Lethbridge where the laboratory budget is a separate designated amount.

The Provincial Laboratories are funded by global budgets from Alberta Department of Health, the Edmonton laboratory being administered by the University of Alberta Faculty of Medicine and the Calgary laboratory by the Foothills Hospital.

The Red Cross Blood Transfusion Service budgets are separate for the Edmonton and Calgary centres. They are part of the National Red Cross Blood Transfusion Service budget with the Alberta portion of the funding provided by Alberta Department of

Health. Separate funding is provided for the prenatal hepatitis B screening program by Alberta Department of Health.

3.5 TYPES OF STAFF EMPLOYED

Laboratory physicians include general pathologists, anatomic pathologists, medical microbiologists, medical biochemists, hematopathologists and other specialist physicians who include Laboratory Medicine in their practice.

Laboratory scientists (PHD and MSc) are usually one discipline specialists.

Technical staff are predominantly Registered Technologists (RT) certified by examination through the Canadian Society of Laboratory Technologists. Combined Laboratory X-Ray Technicians (CLXT) are predominantly employed in rural facilities and private laboratories and usually work under RT supervision or in very restricted circumstances.

4.0 STRENGTHS AND WEAKNESSES IN THE CURRENT LABORATORY SYSTEM

4.1 STRENGTHS

4.1.1 Laboratory Service is Readily Available to All Albertans

Laboratories are located close to physicians' offices, particularly in the urban areas where 80% of Alberta's population resides. There is a full range of services available through every laboratory as a result of intersectoral referral capability.

4.1.2 High Quality Services

Established standards, guidelines and a uniform accreditation system in the private and hospital sectors assure high quality results.

4.1.3 Government Support

Laboratory services for rural hospitals have been significantly upgraded in the last 10 years. Hospital and private laboratories have received adequate funding to enable them to keep up to date and maintain high quality.

4.1.4 Education Programs for the Provision of Qualified Staff

Well trained specialists in Laboratory Medicine have come from Alberta's medical schools and residency programs. Adequate numbers of quality medical technologists have been trained in Alberta's schools of Medical Technology.

Alberta laboratories and their staff have contributed significantly to education through affiliation with the educational institutions for the training of medical and paramedical personnel in addition to laboratory personnel.

4.1.5 Microbiology Reference/Referral Service

A high quality referral and reference service in microbiology is available through the Provincial Laboratories.

4.1.6 Blood Donor Services

High quality blood products for transfusion are made available due to stringent testing of donor blood obtained through the Red Cross voluntary donor system.

• 4.1.7 Four Different Sectors Providing Alternatives

Alberta's laboratory sectors have each made significant contributions to the effective delivery of laboratory services. Despite perceived conflicts, the system has resulted in the provision of high quality laboratory services to Albertans. The availability of alternate approaches to the provision of laboratory services is a major strength of the system.

4.2 WEAKNESSES

4.2.1 Lack of Comparable Activity Data Collection and Reporting

Activity data collection and reporting currently differs among sectors. This makes assessment and direct comparisons virtually impossible. Private laboratories count services linked to patient and ordering physician. Hospitals count StatsCan units, and the Provincial Laboratories count cultures, neither of which are linked to patient or ordering physician.

4.2.2 Funding

The variety of funding methods without comparable activity data may lead to inequities in funding. Inconsistencies in policies dealing with charging for services between facilities and sectors may also lead to inequities. Budget restrictions in one sector may curtail that sector's utilization, often resulting in a shift of the work and cost transfer to another sector or sectors.

4.2.3 Lack of Effective Communication Between Sectors

The lack of a means of communication results in laboratories in each sector not being clear as to their own sector's roles or the roles of the other sectors. Conflicts between sectors have no mechanism for resolution.

4.2.4 Duplication of Services

The demand for on site testing, particularly in rural areas, can result in low volume, high cost laboratory operations in both the private and public sectors. Lack of coordination between private and hospital sectors has resulted in duplication of services, particularly in some rural communities. No controls on expansion or alternatives makes rational allocation difficult.

Urban, university and regional hospitals have no incentives to share services; hence the duplication of some low volume procedures and the failure to take advantage of the economies of scale.

4.2.5 Transfer of Patient Data Between Facilities

There is no incentive or mechanism to transfer patient results from private to hospital sectors, or between facilities within sectors to avoid duplicate testing. Although some data is transferred, whether duplication of testing contributes significantly to increased utilization is not known.

4.2.6 Deficiency of Appropriately Trained Laboratory Physicians

A shortage of laboratory physicians, general pathologists in particular, exists in the province relative to present and future needs.

4.2.7 Absence of an Effective Mechanism to Transfer Development Work Within and Between Sectors

Rural and urban hospitals all independently develop their own methods resulting in expensive reduplication.

5.0 ACTIVITY DATA GATHERING AND COLLECTION SYSTEMS IN EACH SECTOR

5.1 DATA COLLECTION

At the present time comparable laboratory diagnostic service data from the four sectors is not brought together in a comparable format because sector reporting methods are different, and in fact incompatible, thus preventing accurate comparison.

5.2 PRESENT METHOD OF DATA GATHERING IN HOSPITAL LABORATORIES

Statistics relating to the volume of workload for hospital laboratories are reported to government as StasCan units. These are broken down into several different patient and other related activity categories. The item for count on which StatsCan units are based is almost equivalent to tests in chemistry and hematology but not equivalent in microbiology and blood transfusion services. There is no linkage of workload data or costs to the patients receiving the services nor to ordering physicians. Most hospital laboratories keep a count of tests analogous to AHCIP fee for services codes (E codes) but again, these could only be linked to patient and physician with great difficulty.

StatsCan units measure technical time only, excluding capital costs, supply costs, professional time and other activities. They are a poor measure of utilization and a poor basis for funding, although they are used to establish hospital laboratory budgets.

5.3 PRESENT METHOD OF DATA GATHERING IN PRIVATE LABORATORIES

Private laboratories are funded by AHCIP through the Schedule of Medical Benefits on a fee for service basis. All such services are linked to the patient receiving them and to the ordering physician in a manner such that patient or physician profiles can be generated. In that a fee exists for each service, a monetary value has been established. The counting of services alone does not take into account the variation in complexity among the 416 laboratory services funded by the fee schedule.

The fee schedule has not been kept up to date to reflect changes in technology and relative values do not entirely reflect the cost or the complexity of the procedure. As

well, fees do not take account of economies of scale.

Schedule of Medical Benefit services could easily be adapted to hospital services. Prior to 1980 hospitals were reimbursed for outpatient services by Schedule of Medical Benefits fees, a procedure discontinued when interhospital billing was discontinued.

5.4 PRESENT METHOD OF DATA GATHERING IN THE PROVINCIAL LABORATORIES

The provincial laboratories count the number of cultures or serologic samples submitted without accounting for the variability in the complexity and number of the procedures performed per specimen. Consequently, the count is not analogous to either AHCIP services or StatsCan units. AHCIP does not require designation of site or type of culture but this could easily be added to the billing procedure.

5.5 PRESENT METHOD OF DATA GATHERING IN THE RED CROSS BLOOD TRANSFUSION SERVICE

The Red Cross Blood Transfusion Service provides statistics to the National Blood Transfusion Service with no linkage to the other Alberta laboratory sectors.

5.6 DISCUSSION - DATA GATHERING AND REPORTING

It was agreed that the lack of a comparable system of data collection makes the monitoring of utilization trends and the determination of relative costs difficult if not impossible to determine. The counting of services only, without taking into account the complexity (as the StatsCan units attempt to do), may create problems in establishing equitable funding.

Achieving compatible reporting methods will involve considerable study. A pilot project for the linkage of hospital laboratory data to patient and physician is at present being carried out by the Department of Health. This should determine the feasibility of linking laboratory data on the hospital patients to the private sector services using a common denominator.

Linkage of all laboratory services in the four sectors to patient and physician would allow for the generation of complete patient or physician utilization profiles. The extent of duplication of tests could be identified. Collection of linked service data in the hospital, Provincial Laboratory and Red Cross sectors may prove difficult without a change in methods of data reporting and funding.

6.0 RECOMMENDATIONS

6.1 FUTURE ROLES OF THE FOUR SECTORS

Future delivery of laboratory services must relate the sectors in a more coordinated manner while maintaining the high quality of service and encouraging cost efficiencies by integrating the strengths of each. An equitable distribution of funding is also required.

Although roles for each sector can be delineated, these must not be so rigid as to preclude innovative and alternative methods of delivery being developed. Ideally a dynamic system is required that evolves with changing patterns of medical care. Role

changes within sectors may occur in the future as integrated parts of the overall scheme for the delivery of laboratory services.

Recommended primary and secondary roles summarized in Table 2 attempt to delineate the unique aspect(s) of each sector. Primary roles are directly related to patient care and include diagnostic services, blood donor and transfusion services, public health and microbiologic reference services. Secondary roles support the functioning of the laboratory system and other sectors as required.

6.1.1 Hospitals - Proposed Future Role

University and Specialty Hospitals

The University of Alberta Hospital, the Foothills Hospital, the Cancer Hospital's and the Childrens Hospital, because of their emphasis on tertiary care and close integration with the university medical schools, have available reference services, a particular value to urban hospitals, regional hospitals and private laboratories. They may also provide a regional referral service as required including operational consultative services for rural hospitals.

The educational and research and development roles for these hospitals, although listed in Table 2 under secondary roles, should be considered major priorities to ensure the satisfaction of their university affiliation obligations. As a result of the educational and research and development roles, they can serve as an excellent resource for consultation to the urban/regional hospitals.

Funding of educational, research and development and operational consultative roles must be appropriate and not linked or forced to rely on diagnostic service volume.

Urban and Regional Hospitals

Along with primary diagnostic services for their patients, designated urban hospitals should expand their role in providing a regional referral service to rural hospitals. The number of rural hospitals in Alberta would assure a reasonable service load for each urban hospital. This system should assure:

- a) Logical geographic relationships between participating hospitals to achieve cost efficiency but sufficient flexibility to allow for traditional lines of referral and preferences.
- b) Referrals and consultation for laboratory service, including microbiology and blood transfusion services, through this system thus eliminating the present diversity of referral lines maintained by non-regionalized rural hospitals.
- c) That the university hospitals, the Provincial Laboratory and the Red Cross Blood Transfusion Service back up the urban regional hospitals in their regional role.
- d) That accountability for the utilization of laboratory services be introduced between laboratories.
- e) Recognition that consultative, educational and research and development services have a cost which is separately reflected in the budget.

- f) That the concept of shared services be maintained, giving the rural hospitals some choice in their on site testing provided equal or improved quality of patient care and cost efficiency can be demonstrated.
- g) The development of subregional shared services be encouraged where distances dictate under an urban regional relationship.
- h) Larger urban hospitals may also provide limited reference functions based on historic practice patterns and educational resources.

Educational and research and development services would support the diagnostic referral function and the operational consultation required by the regional system. In addition, educational resources to satisfy university and technical institute affiliations will require support.

6.1.2 Private Laboratories - Proposed Future Role

The primary role proposed for private laboratories is to provide diagnostic services to non-hospital based patients. Their expertise in providing conveniently located satellites, primarily for specimen collection, is well suited to this role.

A role which could be developed further is the provision of mobile bleeding teams for home collections and for providing laboratory services to nursing homes, auxiliary and specialized hospitals which do not have on site or adjacent facilities. This function is already being carried out by some private sector laboratories.

Large private laboratories at present provide a reference function which should be utilized to benefit the overall system.

Where private laboratories provide a referral service to rural hospitals or regions they should also provide operational consultative services, possibly in conjunction with a regional hospital.

6.1.3 Provincial Laboratories - Proposed Future Role

Emphasis on reference microbiologic services for the hospital and private laboratory sectors and on public health services should be the primary roles. Communications with LCDC and CDC should be via the Provincial Laboratory as part of the reference function.

R & D and educational and operational consultative roles, while listed as secondary, are essential functions which can assure a high quality of microbiologic services in the province. Close association, both physically and organizationally, with the province's university medical schools complements the achievement of these roles.

Provision of diagnostic services is a secondary role to complement the provision of these services by the private and hospital laboratories.

6.1.4 Red Cross Blood Transfusion Service

The primary role should be both the organization of the blood donor services and the attendant storage and provision of components for transfusion and blood transfusion services for hospitals without on site services. Although listed as secondary, the continuation of the reference services as listed in 2.4.2 is recommended along with the well established prenatal testing program.

6.2 PROPOSALS TO IMPROVE COORDINATION BETWEEN SECTORS AND WITHIN SECTORS

6.2.1 Uniform Activity Data Gathering and Reporting System Between Sectors

Diagnostic laboratory services should be counted in such a way that variations in complexity are taken into account, either by an assigned fee or relative value. Such a count of services, comparable in all sectors, may prove to be a superior way to fund laboratories as opposed to the current unit system. Establishment of a comparable data base between all lab sectors would be desirable in that:

- a) Detection and quantitation of shifts in services between laboratory sectors would be possible.
- b) Knowledge of sector performance would assist in determining the best location of service performance to assure satisfaction of patient care needs.
- c) Cost efficiency could be compared more easily between sectors, contributing to decisions of appropriate location.
- d) It would allow for a more rational review of the role of each sector in the delivery of laboratory services.

6.2.2 Complementary Funding Mechanisms Between Sectors

The present variation in funding methods among sectors which includes global budgets, fee for service and special grants is perceived by many as inequitable. The selection of one sector for budget cuts without paying attention to the impact on the other sectors has often resulted in negation of the cost savings sought due to the potential for a shift in services between sectors as opposed to a reduction in total utilization.

Complementary funding of each sector based on the services they perform, taking into account their complexity and in the context of agreed upon roles is recommended. This should not be based solely on the StatsCan unit system presently used in the hospital sector. Funding of educational, R & D and operational consultative roles must be appropriate and not be linked to or forced to rely on diagnostic service volume.

Fees as in the Schedule of Medical Benefits could serve as the basis for diagnostic services provided consultative, educational and R & D services were separately recognized and funded.

A complementary funding mechanism would allow for the establishment of a system to allow cost comparisons between sectors and between institutions within a sector, taking into account the different categories of service that are defined in this report.

6.2.3 Uniform Accreditation Process for All Laboratories

All laboratories in the four sectors should be a part of a uniform accreditation system. The College of Physicians and Surgeons Advisory Committee for Laboratory Accreditation and Quality Control, which is responsible for accreditation by inspection, and a check sample program, of all laboratories in the private and hospital sectors, could extend its function to the Provincial Laboratories and Red Cross Blood Transfusion Service. Assurances that there be appropriate representation on the committee from each sector and that uniform standards are applied to all sectors would be necessary.

6.2.4 Establishment of an Advisory Committee on Laboratory Services

An Advisory Committee to the Department of Health be established which would be composed of appropriate medical specialists from all laboratory sectors. While the establishment of yet another committee will certainly raise concerns, it will provide a mechanism for input to the Department by those knowledgeable in the delivery of laboratory services. The committee could also provide a mechanism for dealing with intra and intersector problems which at present lack any mechanism for resolution. Facilitation of transfer of method development, transfer of results, and projecting manpower needs are examples of matters that such a committee could advise on.

TABLE 2
PROPOSED ROLES FOR PERFORMANCE OF LABORATORY SERVICES
SERVICES AS DEFINED AND CLARIFIED
FOR EACH SECTOR IN THE TEXT

SECTOR	PRIMARY	SECONDARY
PRIVATE LABORATORIES	Diagnostic Services Non hospital patients	Referral Reference Operational Consultative R & D Educational
HOSPITALS - UNIVERSITY	Diagnostic IP OP Blood Transfusion	Educational R & D Reference Operational Consultative Referral
URBAN REGIONAL	Diagnostic IP OP Blood Transfusion	Referral (Regional) Operational Consultation R & D Educational Reference
RURAL	Diagnostic IP OP	Referral (subregional including physician offices)
PROVINCIAL LABORATORIES	Reference (Microbiology) Public Health	Educational R & D Referral Diagnostic services
RED CROSS BLOOD TRANSFUSION SERVICE	Blood Donor Services Blood Transfusion	Reference Diagnostic Prenatal Education R & D Operational Consultative

TABLE 1
DIFFERENTIATING FEATURES - LABORATORY SECTORS

Sector	Diagnostic Service Limits	College of Physicians and Surgeons Accreditation	Specific Menu Approval	Type of Funding	Type of Staff Employed
1. PRIVATE					
A. Physician Offices	Limited	No	Required CPS(A)	Fee for Services	Physician Non Lab Professional
B. Privately owned labs	No limit	Yes	Not required	Fee for Services	Lab Physician/RT Lab Scientist
2. HOSPITALS					
A. U of A, Edmonton Foothills, Calgary	No limit	Yes	Not required	Global Capital Grants University Medical School	Lab Physician/RT Lab Scientist
B. Urban	No limit	Yes	Not required	Global Capital Grants	Lab Physician/RT Lab Scientist
C. Regional	No limit	Yes	Not required	Global Separate Program Budget Capital Grants	Lab Physician/RT Lab Scientist
D. Rural	Limited	Yes	Required ADH	Global Capital Grants	Lab RT CLXT Path. Consultants
3. PROVINCIAL LABORATORIES					
A. Edmonton	Microbiology	No	Not required	Contract between Government and U of A Dean's office	Lab Physician/RT Lab Scientist
B. Calgary	Microbiology	No	Not required	Contract between Government and Foothills Hosp. Board	Lab Physician/RT Lab Scientist
4. Red Cross Blood Transfusion Service					
A. Edmonton B. Calgary	Immunohematology, Hepatitis & AIDS serology Histocompatibility	No	National Red Cross	Global ADH through Red Cross Blood Transfusion Service	Lab Physician/RT Lab Scientist